

What is claimed is:

1. A transmitting apparatus for transmitting a content, comprising:

a record medium on which at least one content  
5 has been written;

section generating means for generating  
section 1 to section n (where n is an integer) in such  
a manner that when the content is divided into the  
section 1 to the section n in a predetermined ratio,  
10 the length of a section on the beginning side is  
smaller than the length of a section on the end side;

signal formatting means for formatting a  
signal in such a manner that the length of data of each  
of the section 1 to the section n is the same in each  
15 of channel 1 to channel n;

multiplexing means for multiplexing the  
formatted signal; and

transmitting means for transmitting the  
multiplexed signal.

20 2. The transmitting apparatus as set forth in  
claim 1,

wherein the data of each of the section 1 to  
the section n has been written to said record medium  
corresponding to pre-designated addresses.

25 3. The transmitting apparatus as set forth in  
claim 1,

wherein said section generating means divides

the content by  $n$  so that the lengths of the section 1 to the section  $n$  become  $1, 2, 4, \dots, 2^{(n-1)}$ , respectively.

4. The transmitting apparatus as set forth in claim 1,

wherein said section generating means divides the content so that the lengths of the section 1 to the section  $m$  (where  $1 < m < n$ ;  $m$  is an integer) become  $1, 2, 4, \dots, 2^{(m-1)}$ , respectively, and that the length of each of the section  $m$  to the section  $n$  is the same as the length of the section  $m$ .

5. The transmitting apparatus as set forth in claim 1,

wherein said signal formatting means repeats data of the section 1 to the section  $n-1$  so that the length of each of signals of the channel 1 to the channel  $n-1$  is the same as the length of a signal of the channel  $n$ .

6. The transmitting apparatus as set forth in claim 1,

wherein said signal formatting means repeats data of each of the section 1 to the section  $m-1$  so that the length of each of signals of the channel 1 to the channel  $m-1$  (where  $1 < m < n$ ;  $m$  is an integer) is the same as the length of a signal of the channel  $m$  and that the length of each of the signals of the channel  $m$  to the channel  $n$  is the same as the length of the

signal of the channel m.

7. The transmitting apparatus as set forth in claim 1,

5 wherein said multiplexing means multiplexes synchronous data, flag data, and the data of the section 1 to the section n, the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each of the section 1 to the section n.

10 8. The transmitting apparatus as set forth in claim 1,

wherein the multiplexed signal is modulated.

9. A transmitting method for transmitting a content, comprising the steps of:

15 writing at least one content to a record medium;

generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a  
20 predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side;

formatting a signal in such a manner that the length of data of each of the section 1 to the section  
25 n is the same in each of channel 1 to channel n;

multiplexing the formatted signal; and  
transmitting the multiplexed signal.

10. The transmitting method as set forth in claim 9,

wherein the data of each of the section 1 to the section n has been written to the record medium corresponding to pre-designated addresses.

11. The transmitting method as set forth in claim 9,

wherein the content is divided by n so that the lengths of the section 1 to the section n become 1, 2, 4, ...,  $2^{(n-1)}$ , respectively.

12. The transmitting method as set forth in claim 9,

wherein the content is divided so that the lengths of the section 1 to the section m (where  $1 < m < n$ ; m is an integer) become 1, 2, 4, ...,  $2^{(m-1)}$ , respectively, and that the length of each of the section m to the section n is the same as the length of the section m.

13. The transmitting method as set forth in claim 9,

wherein data of the section 1 to the section n-1 is repeated so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

14. The transmitting method as set forth in claim 9,

wherein data of each of the section 1 to the

section m-1 is repeated so that the length of each of signals of the channel 1 to the channel m-1 (where  $1 < m < n$ ; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

15. The transmitting method as set forth in claim 9,

wherein synchronous data, flag data, and the data of the section 1 to the section n are multiplexed, the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each of the section 1 to the section n.

16. The transmitting method as set forth in claim 9,

wherein the multiplexed signal is modulated.

17. A receiving apparatus for receiving a signal from a transmitting apparatus and reproducing the received signal, the transmitting apparatus having a first record medium on which at least one content has been written, section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side,

signal formatting means for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing means for multiplexing the formatted signal, and transmitting means for transmitting the multiplexed signal, the receiving apparatus comprising:

separating means for separating the received signal;

detecting means for detecting beginning data of each of the section 1 to the section n from the separated signals;

a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively;

reading means for successively reading data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to said second record medium starting from the beginning data of the section 1, the data of the section 1 is read from said second record medium, and the data of the section 1 is read from said second record medium; and

reproducing means for reproducing the data of the section 1 to the section n that has been read from said second record medium.

18. The receiving apparatus as set forth in claim  
17,

5 wherein said detecting means detects bit 1 to  
bit n corresponding to the section 1 to the section n  
of flag data contained in the signal so as to detect  
whether or not beginning data of the section 1 to the  
section n are present.

19. The receiving apparatus as set forth in claim  
17,-

10 wherein when the content is divided so that  
the lengths of the section 1 to the section m (where  $1 < m < n$ ; m is an integer) become 1, 2, 4, ...,  $2^{(m-1)}$ ,  
respectively, and that the length of each of the  
section m to the section n is the same as the length of  
15 the section m, said second record medium has a capacity  
for which the total of the lengths of the section 1 to  
the section m and the length of the section 1 can be  
written.

20. A receiving method for receiving a signal  
20 from a transmitting apparatus and reproducing the  
received signal, the transmitting apparatus having a  
first record medium on which at least one content has  
been written, section generating means for generating  
section 1 to section n (where n is an integer) in such  
25 a manner that when the content is divided into the  
section 1 to the section n in a predetermined ratio,  
the length of a section on the beginning side is

smaller than the length of a section on the end side,  
signal formatting means for formatting a signal in such  
a manner that the length of data of each of the section  
1 to the section n is the same in each of channel 1 to  
5 channel n, multiplexing means for multiplexing the  
formatted signal, and transmitting means for  
transmitting the multiplexed signal, the receiving  
method comprising the steps of:

separating the received signal;

10 detecting beginning data of each of the  
section 1 to the section n from the separated signals;  
writing the beginning data of each of the  
section 1 to the section n to channel 1 to channel n,  
respectively, to a second record medium;

15 successively reading data of the section 2 to  
the section n from the second record medium after the  
beginning data of the section 1 is detected, the data  
of the section 1 is written to the second record medium  
starting from the beginning data of the section 1, the  
20 data of the section 1 is read from the second record  
medium, and the data of the section 1 is read from the  
second record medium; and

reproducing the data of the section 1 to the  
section n that has been read from the second record  
25 medium.

21. The receiving method as set forth in claim  
20,



wherein bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal are detected so as to detect whether or not beginning data of the section 1 to the section n are present.

22. The receiving method as set forth in claim 20,

wherein when the content is divided so that the lengths of the section 1 to the section m (where  $1 < m < n$ ; m is an integer) become 1, 2, 4, ...,  $2^{(m-1)}$ , respectively, and that the length of each of the section m to the section n is the same as the length of the section m, the second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.

23. A transmitting and receiving system having a transmitting apparatus for transmitting a content and at least one receiving apparatus for receiving the transmitted content and reproducing the received content,

wherein the transmitting apparatus comprises:  
a first record medium on which at least one content has been written;

section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the

section 1 to the section n in a predetermined ratio,  
the length of a section on the beginning side is  
smaller than the length of a section on the end side;

5 signal formatting means for formatting a  
signal in such a manner that the length of data of each  
of the section 1 to the section n is the same in each  
of channel 1 to channel n;

multiplexing means for multiplexing the  
formatted signal; and

10 transmitting means for transmitting the  
multiplexed signal,

wherein the receiving apparatus comprises:

separating means for separating the received  
signal;

15 detecting means for detecting beginning data  
of each of the section 1 to the section n from the  
separated signals;

a second record medium on which the beginning  
data of each of the section 1 to the section n is  
20 written to channel 1 to channel n, respectively;

reading means for successively reading data  
of the section 2 to the section n from said second  
record medium after the beginning data of the section 1  
is detected, the data of the section 1 is written to  
25 said second record medium starting from the beginning  
data of the section 1, the data of the section 1 is  
read from said second record medium, and the data of

the section 1 is read from said second record medium;  
and

reproducing means for reproducing the data of  
the section 1 to the section n that has been read from  
said second record medium,

wherein the transmitting apparatus transmits  
the content that has been divided by n to the receiving  
apparatus through a transmission line, and

wherein when the receiving apparatus detects  
beginning data of the received content, the receiving  
apparatus reproduces the content.

24. The transmitting and receiving system as set  
forth in claim 23,

wherein the data of each of the section 1 to  
the section n has been written to said first record  
medium corresponding to pre-designated addresses.

25. The transmitting and receiving system as set  
forth in claim 23,

wherein said section generating means divides  
the content by n so that the lengths of the section 1  
to the section n become 1, 2, 4, ...,  $2^{(n-1)}$ ,  
respectively.

26. The transmitting and receiving system as set  
forth in claim 23,

wherein said section generating means divides  
the content so that the lengths of the section 1 to the  
section m (where  $1 < m < n$ ; m is an integer) become 1,

2, 4, ...,  $2^{(m-1)}$ , respectively, and that the length of each of the section m to the section n is the same as the length of the section m.

27. The transmitting and receiving system as set forth in claim 23,

wherein said signal formatting means repeats data of the section 1 to the section n-1 so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

28. The transmitting and receiving system as set forth in claim 23,

wherein said signal formatting means repeats data of each of the section 1 to the section m-1 so that the length of each of signals of the channel 1 to the channel m-1 (where  $1 < m < n$ ; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

29. The transmitting and receiving system as set forth in claim 23,

wherein said multiplexing means multiplexes synchronous data, flag data, and the data of the section 1 to the section n, the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each

of the section 1 to the section n.

30. The transmitting and receiving system as set forth in claim 23,

wherein the multiplexed signal is modulated.

5 31. The transmitting and receiving system as set forth in claim 23,

wherein said detecting means detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect whether or not beginning data of the section 1 to the section n are present.

10 32. The transmitting and receiving system as set forth in claim 23,

wherein when the content is divided so that the lengths of the section 1 to the section m (where  $1 < m < n$ ; m is an integer) become 1, 2, 4, ...,  $2^{(m-1)}$ , respectively, and that the length of each of the section m to the section n is the same as the length of the section m, said second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.